

been encrypted or not. The fourth information is information to control the copy restriction of the digital signal recorded on the recording medium.

#### BRIEF DESCRIPTION OF THE DRAWINGS

5                    Fig. 1 is a constructional diagram in the case where a digital signal recording and reproducing apparatus according to an embodiment of the invention is connected to a digital signal output apparatus and a digital signal input apparatus;

10                   Fig. 2 is a constructional diagram of the digital signal output apparatus;

                  Fig. 3 is a constructional diagram of the digital signal input apparatus;

15                   Fig. 4 is a constructional diagram of a packet for a digital broadcast signal;

                  Fig. 5 is a constructional diagram of a packet for a digital interface;

20                   Fig. 6 is a constructional diagram in the case where a digital signal recording apparatus according to the embodiment of the invention is connected to the digital signal output apparatus; and

25                   Fig. 7 is a constructional diagram in the case where a digital signal reproducing apparatus according to the embodiment of the invention is connected to the digital signal input apparatus.

#### DESCRIPTION OF THE EMBODIMENTS

An embodiment of the invention will now be described hereinbelow with reference to the drawings.

Fig. 1 is a diagram showing an embodiment in the case where a digital signal recording and reproducing apparatus according to an embodiment of the invention is connected to a digital signal output apparatus and a digital signal input apparatus.

Reference numeral 100 denotes a digital signal recording and reproducing apparatus such as digital VTR, digital disk recorder, or the like for recording a digital broadcast signal inputted from a digital interface onto a recording medium, reproducing the digital broadcast signal recorded on the recording medium, and outputting it from the digital interface.

A compressed digital video signal, a compressed digital audio signal, and the like have been divided and multiplexed into a packet for the digital broadcast signal and stored into the digital broadcast signal. In case of transferring the digital broadcast signal by the digital interface, the digital broadcast signal packet is stored into a packet for the digital interface and transferred.

The digital signal recording and reproducing apparatus 100 includes: an interface circuit 101; a decoding circuit 102 for decoding a scramble of the signal inputted from the digital interface; an encrypting circuit 103 for scrambling the signal which is outputted to the digital interface; a selecting

circuit 104 for selecting the packet of the digital broadcast signal; a recording signal processing circuit 105 for performing a process for recording the digital broadcast signal onto the recording medium; a reproduction signal processing circuit 106 for performing a process for reproducing the digital broadcast signal from the recording medium; a recording medium 107 for recording the digital broadcast signal; and a control circuit 108.

When the digital broadcast signal is inputted to the digital signal recording and reproducing apparatus 100, the packet for the digital broadcast signal is extracted from the packet for the digital interface by the interface circuit 101. Subsequently, if the digital broadcast signal has been encrypted, a decrypting process of the packet for the digital broadcast signal is executed by the decrypting circuit 102. Next, the packet for the digital broadcast signal in which the video data and audio data which are recorded have been stored is selected by the selecting circuit 104. After that, the digital broadcast signal is recorded onto the recording medium 107 by the recording signal processing circuit 105. The digital broadcast signal can be also converted into another packet format and recorded onto the recording medium 107. The digital broadcast signal can be also recorded without being converted into the packet. The recording medium 107 can be also constructed like a cassette tape